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Death by diabetes: America's preventable epidemic

# Low-carb diets work. Why does the American Diabetes Association push insulin instead?

The American Diabetes Association takes millions from companies that stand to profit from our reliance on drugs. Is that affecting their guidance?

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For a glimpse into how big business influences the $4tn US healthcare system, look no further than the world's most powerful diabetes advocacy and research non-profit, the American Diabetes Association (ADA).

Diabetes afflicts 38 million Americans, with another 90 million considered pre-diabetic. Every year the disease claims the lives of over 100,000 Americans and disproportionately affects people of color. It is also ruinously expensive, as doctors visits, hospital stays, insulin, blood test strips, leg amputations, continuous glucose monitors and numerous glucose-lowering drugs add up to about $400bn a year. To put it bluntly, we are losing the war on diabetes.

And unlike many other diseases - such as certain cancers, Alzheimer's, kidney disease, or Crohn's - type 2 diabetes is reversible.

This bears repeating and elaboration. Numerous nutritional studies have shown that diabetes can be reversed through a strict diet low in carbohydrates, the macronutrient that people with diabetes cannot metabolize without the help of drugs. The ADA concedes this - but you wouldn't necessarily know it from the drug therapies or the foods and recipes that the organization recommends to people suffering from the condition.

In 2020, the then ADA president, Tracey D Brown, rocked the diabetes world when she disclosed that she had type 2 diabetes and had gotten off insulin and other medications by adhering to a low-carbohydrate diet.

"Here is what I do. And it is pretty simple," she said in an interview that might have made the ADA's pharmaceutical benefactors crazy. "Elevated blood sugars happen when you have sugars in your body and you don't have insulin to manage the sugars in your body. Carbohydrates turn into sugar. So I just try to get people to be aware of how many carbohydrates you are actually putting in your body."

The very next day, the low-carb-focused website DietDoctor.com published a "breaking news" story about the "highly encouraging news" that "the influential CEO of the American Diabetes Association (ADA) is on the record as a low-carb eater". The following year, Brown resigned her position at the ADA to take a senior role at Walgreens.

The evidence that low-carb diets can effectively treat diabetes has been around at least since before insulin's discovery in 1921, when doctors often prescribed very low-carb (ie low-sugar), fat-rich diets to their patients. In the late 18th century, as recounted in Gary Taubes's book Rethinking Diabetes: What Science Reveals About Diet, Insulin and Successful Treatments, a Scottish doctor by the name of John Rollo helped two patients with diabetes (a rarer condition those days) return to health by

restricting their carbohydrate intake.

"The ingenious author of the work now before us," a 1797 article in the Edinburgh review Annals of Medicine said, "recommends a mode of treatment, which in some cases, has been decidedly productive of remarkable benefit."

In 2019, the ADA quietly and grudgingly acknowledged the low-carb diet's effectiveness. In a journal article on dietary guidelines in its medical journal Diabetes Care, the ADA gave the low-carb diet its due:

"Low carbohydrate eating patterns, especially very low-carbohydrate eating patterns, have been shown to reduce A1C" - the metric that measures one's blood sugar levels over a period of time - "and the need for antihyperglycemic medications. These eating patterns are among the most studied eating patterns for people with type 2 diabetes."

***The ADA still sees diabetes as a progressive disease that gets worse over time***

Unfortunately, the ADA still sees diabetes as a progressive disease that gets worse over time. It still sanctions insulin therapy for people with type 2 diabetes, a remedy many doctors say will harm patients in the long run.

"Type 2 diabetes is a condition of too-high blood sugar and too-high insulin where the body is resisting the effects of insulin, and signaling that it has stored enough," Mariela Glandt, a Harvard-trained endocrinologist who prescribes a low-carbohydrate diet to her patients in the Bronx, told me. "Giving insulin to someone with diabetes is like giving more alcohol to an alcoholic when they are shaking. It will treat the symptom - ie, the high sugar will come down - but in the end we make the disease worse and increase the chances of long-term complications."

As I previously wrote about in the Guardian, I was diagnosed with type 2 diabetes three years ago and prescribed insulin shots and metformin, but was able to get off all medication by adhering to a strict low-carbohydrate diet.

The experience left me baffled. I couldn't understand why only a tiny minority of clinicians seem to recommend a diet-based approach to diabetes treatment, rather than the insulin-heavy regimen I was initially prescribed. Or why the ADA's huge educational campaigns soft-pedaled the diet, and preferred to let millions of people with type 2 diabetes take numerous medications or shoot themselves up with insulin instead.

This is not a minor matter; if people with diabetes were told clearly and unambiguously that if they stopped eating carbohydrate-rich foods they could probably arrest or reverse their diabetes, could thousands of lives and billions of dollars be saved?

dollars be saved?

"The reality is that if you want to treat type 2 diabetes effectively, the first thing you have to do is throw out the ADA's dietary guidelines," Sami Inkinen told me. Inkinen founded Virta Health, a healthcare startup that treats people with diabetes by prescribing a very low-carb diet. "The ADA has been slow to accept change. Very slow."

The ADA's messaging seems almost calculated to add to the confusion – as if, after 80 years of existence and billions of dollars spent on medical research, the ADA is merely a helpless observer in the low-carb diet debates.

"From carb-free to low-carb, to whole and empty carbs, it's hard to know what it all means," the ADA website reads. "'Carbohydrates' or 'carbs' get a lot of attention these days and it's no secret that carbs can affect your blood glucose (blood sugar). You might be wondering if you should eat less of them, or even eat them at all. You're not alone!"

The ADA's chief scientific and medical officer, Dr Robert A Gabbay, said that the ADA's dietary guidelines were the result of a rigorous scientific process undertaken annually by a team of medical experts who scrutinize the latest studies about how best to treat type 2 diabetes. "There is no 'one size fits all'," he told me. "There is more than one way for people to successfully manage their diabetes."

He added that corporate funders have no say in the organization's guidelines: "The standards of care process receives no funding from the industry, [and] our guidelines and recommendations are based on science."

The ADA has a major say in how diabetes is managed globally. Its medical practice committees issue Standards of Care medical guidelines to American physicians and doctors around the world. The organization boasts a $100m annual budget, 600,000 volunteers and has 20,000 members from the healthcare community. It holds bike-a-thons and walk-a-thons, and publishes dietary guidelines and recipes that are downloaded by the millions every year. It publishes academic journals and holds medical conferences in which the latest research is presented. It funds medical research. It hosts summer camps for children with diabetes.

"Their professional practice committee writes all of the guidelines that we follow," Kasia Lipska, an endocrinologist at the Yale School of Medicine, told me. "Clinicians have a lot of respect for that body. Their guidelines are the bible for diabetes medical practice."

The ADA is far from the only obstacle to widespread adoption of a low-carb diet. Absent a national health education initiative that links carbohydrates to the diabetes epidemic, low-carb clinicians will be a voice in the wilderness. It can be challenging

for many people with diabetes to forgo the breads, sweets, pastas and starches that form the basis of many diets. And given the dearth of healthy eating options on the shelves of many American supermarkets, some clinicians I spoke with, each of whom was dedicated to their patients' wellbeing, said it was more effective to simply prescribe their patients pharmaceuticals.

*Diabetes was hijacked as a business opportunity almost from the moment that insulin was first discovered*

"The low-carb diet can resonate," a retired endocrinologist told me. "But of all the patients I had who adopted low-carb diets, very few were from lower socio-economic classes."

Diabetes was hijacked as a business opportunity almost from the moment that insulin - the hormone that people with type 1 diabetes cannot produce - was first discovered by a team of researchers at the University of Toronto. In 1923, the University of Toronto board of governors sold the patent for insulin to Eli Lilly and Company for $1, because Lilly was better able to manufacture and distribute the synthetic hormone. "Insulin does not belong to me," the insulin medication's co-inventor, Sir Frederick G Banting, said. "It belongs to the world."

Eventually two international drug companies - now known as Novo Nordisk and Novartis - wrangled patents as well.

"The reason the insulin story is so outrageous is that the inventors of insulin wanted insulin to belong to everybody," David Mitchell, the founder of the non-profit organization Patients For Affordable Drugs, told me. "Somehow these three drug companies got together to create a global oligopoly. It's a remarkable thing when you consider the birth of insulin."

The ADA's corporate contributions are not precisely traceable. Based on financial filings, this is what we know: between 2017 and 2024, more than 50 pharmaceutical and device manufacturers contributed over $134m to the organization, or roughly 20% of its total funding. Food industry contributions were not broken out.

It isn't difficult to see how contributors to the ADA get bang for their buck. The ADA's social media feed is a virtual supermarket of products purveyed by its funders.

Need a diabetes test? Go to CVS! ($10m 3 year partnership in 2021.) Want to learn more about kidney care? Do it with DaVita! ($1.5m in 2024.) Want to donate to the ADA? Just head over to your local GNC store and put your money in the tin can. ($100k in 2024.) Needless to say, a low-carbohydrate product that lowers blood sugar also reduces need for the drugs and ancillary products that make diabetes such a boon for the healthcare industry.

In 2021, Patients for Affordable Drugs published a landmark report exploring

connections between 15 patient advocacy groups and the pharmaceutical industry. The ADA scored lowest because it: "Accepts funding from pharma industry" and also because it "Has board members with financial ties to pharma industry; Shares lobbyist and/or lobby firm with pharma," the report said.

Reading the ADA's publications, one would get the impression it is a grassroots organization supported by moms and pops. A banner on their website blares: "Your Support Goes Twice as Far!" Every few seconds, a pop-up announces a new small donation: "Patrick F donated $100." "L Robert H. donated $12." "Al S donated $20." These small donors may not know that, in 2021, the Patients for Affordable Drugs report, found that a third "of the members of the ADA board of directors have financial ties to the pharmaceutical industry".

Diabetes is a national scandal hiding in plain sight. Despite infinite medical innovations, including glucose-lowering drugs, fast- and slow-acting insulin, A1C tests, continuous glucose monitors and insulin pumps, more than 100,000 Americans die from the condition annually. In 1980, before many of these medical breakthroughs were available, that number was 35,000.

The big winners of the ADA's cozy arrangements with industry, of course, are the pharmaceutical companies that enjoyed an estimated $58bn in annual sales in 2017, and the medical device and food companies who donate to the ADA in exchange for recipe endorsements.

The losers are the millions of people with diabetes who suffer amputations, blindness, neuropathy, often daily shoot themselves with insulin and eat carbohydrate-rich foods because they simply are not informed about their healthier options. It is not too late for the ADA to, loudly and in no uncertain terms, tell people with diabetes the truth. It might lose funders, but it would also save lives.

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